

SEQUENCE LISTING

SEQ ID NO. 1

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aggacaaatg gacctgtaat tccgggtgtg acgagagAAC gagatttacc ttctgaatt
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ctt

SEQ ID NO. 2

Exon

CGCGCGGCCG CTCCAGTCGG AAGGAGCCGT TGCAGCCCTG CCCGGCGTGT GCGGGGGTCA
GCGAGGCCCC TCGGTGCTT CGCCGCGGCC TTCCGCTCCG CACTCACCCG CCCTCTGGGC
CTCCACAGG TCGGCGCCGC CAGCGCGGGG TACCGGCCCG CAGAGGGAGG GCGGGCTGTG
AACTGGCAGC ACATCGCGTT CCCGCGGGGC CCCATTCTG CCCAGGCAGG GAGCGGCTGG
GATGGGACTG AGGTGCGTCC GCGAGCGCGG TGCCCCAGAG ACCCGGCTTC TGGAAGTTGC
CGCGGCCTGC TCTTGGGGCC CAGAAGTAGG GCGGGGAGGC GCGGGGTCTG GAGTCTGCAG
GACCTGGCTG CGAATCCAAC CAGCTGATTT CAAACTTTTC TGTGATCTTC TGCAAGTTAA
CTAAGTCTCA GTTCCTCGTT TGCGAAATGT ACTTAATAGG CACCCAGGG TGAATAAAT
TTGTCCGCAC AGACTGCAGC ATTGCGCTTG GGAGGCGCCT TAGGGGGTAG GAGTACTAA
TATCACTGAG TTTTGACAGA AATGAAGTG CATTGGCAA G

SEQ ID NO. 3

Intron

GTGTGCCCCA TGGCCGGGCA GGTTAGGAGG AGGGCCTGGT AATATTTTTT CTAAATTGT
AAACAGCCAT CTGGATGAGC AATGCATTAT CAAATTATGA TTCAGAGAGG ACTATCGCTG
ACTACTCTTT TTTTGGGCA AACCTCCGCT TCAGGAGCTT CTGGCTTGAT TCCTAAGTGG
AAGGTAGAGA CCTAGGCCCT CTGAGTCACA ACTCCATCTC TCTGGGTGAG GACTGAGCTC

CAGGACTGCT GAGTGGAGGC AGAACAATTG GGATAGGGAA AAGAGAGGCC AAAC TAGATC
AGAGGCTGGC GTGGGCTTCA GAATCTACAG ACTGGCACAG TTAATGCCTC CGGGCCCCCTA
TTGCTGCTTC AAGTTTGACC AATCAGAAGT ATCTTTAGCT TAAGGGCGGC GTGTTGGCCA
ATGAGACTTT ATTGTGAAAT AAAATGCCCT CAGTTTCATT TAACTGAGCC ACCATAGAAG
AGTAGAGAAA TCGAGTTGGC CAGATGAGGG AGAGGCCATT AAGAGGTATT TTAGGGATTG
AATGGGCTGG GCACCCAGAG GACAGTGGCA TTTGGGGTGG TAATGAGAAG GAACATTAGG
GGCCTCCGCC TCCTTCCGTT CCTCCTGTGC TGAGTCAGTC AGCACAGAGG CTGCAGGAGG
TATCTCTGGT TGGCTTTGGC TGCCTGTAGG GGGCACCAGC TTTGGGGAGG TCAGAGGGCT
CTCTCCTGAG CTGCTGTCCT GCCACAATC ACACCTGCCT GATGCCTGTG AATGGCCGTC
TGAGTCTCTT GGGCCTTGGT CACTTCTGGC CTGCCCTGCA CCGACCAGTA ACTGTGCCTG
ATGACTGGAG GTATGGGAAT TCACCGGACT TTATTGTTCT TTGTAG

SEQ ID NO. 4

Exon

GAATCAAAGA TCAACTCCCA CTGAGGACAA ATGGACCTGT AATTCCGGGT GTGACGAGAG
AACGAGATTT ACCTTCCTGA ATTA AAAAAC AG

SEQ ID NO. 5

Intron

GTCATTAAGC TTGGGCCCTG ACTCTTCTTT GTGAGAAGGT ACAGAGATGG AAACCTTACA
ATCCGAGACT AAAACGAGGG TCCTTCCCTC ATGGCTGACA GCCCAGGTGG CTACAAAGAA
TGTGGCACCA ATGAAGGCC CCAAGAGGAT GAGAATGGCA GCAGTGCCAG TGGCAGCAGC
AAGGTGCGAC AGCTCTGGTC AGAAGACTCC TGCGAATCTG GCAAGTGGAG CAGGGGCCTC
CATGACCTGG GCCAGGTCTT CCAGCCTAGG CAGAACAGCA AGATGGGCGG GTGTTTCAGT
CTGATCATCT CTTGAGCTTT TAGAAGGTGG AGGGGCTGTG GGCGGGAGGC AAAGCGGGTT
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CTCTTCCTTT ACAACAAACA TGGTAACATC AGATGGGCAA GATCAGTGGA AGGGTCTGTT
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CACTCGGTGT TTCCCTCTCT GGCTCCTCCT CCTCTAAGGT TTCCTGACTG ACAGCCTTCC
CTTGACTG CTGCCGTCTT TCCCTAAGTC TGGTCTGCT TTCAGGTTC TCTCAGTACA
GCCTCAGCCC GAGGTTCCCT TCCTCTTGCA TCCATGTGTG TGTTTCAGAG GCGGCCATCC
TTCCCTACTT CCAGATCCTT GTAGGGCAGT TGGTGGAGGG TGGGAGGCAC CCCGGTGTG
CCTCCATGAA GCCCTGTGCC AGTCACTGGG CTGCAAGGCT GAGGAAATTG TGTCCGTGTC
AGAAAGCTCC TCAGCTCAGA GGTGCTGGTA CCTCCTGCGT GGTAGGAAGG CAGGGGGAAG
AGGCCCTGCT TCTCCTGTTT TCTTTGCCCT TATGAGACTT GAGAGTCTGT GTCATCTGTG
CCTTGCAATG CTTTTTTTCA G

SEQ ID NO. 6

Exon

ACTCCCTGCG ACAAGGACTG TGTA CTGCAT GAATGAGGCT GAGATAGTTG ATGTTGCTCT
GGGAATCCTG ATTGAG

SEQ ID NO. 7

Intron

GTAAAGTCAG ACAAGCCTCT TACTCATGAC CAGAAACTCT GCATGGGCAG AGGCTAGACC
CTTGGTCACC GTCAGTAAGA GAGACGCCCT CTGCCGTAGG CTACCTCTTC TTCCTCCTGC
CACTTCCCTT GCTCTTATCT CGGCCATGCT GCCCAGGCCT CTCCCCATGT GGGTGTGCGC
TCGTGGGGTG TCTTTGAGGC TAGAAGCCTG GGAGGGCATG CGTGTGTTAG GGAGGGCGTG
TGTGTGTTAG GGAGAGCGTG ACTGTGCACT GGTGTGTATG TGGATGGGAC ATGAAGCGTT
TACCTGTTTG TGTTCTTGGA AAGGTTCCCA GTTGGGTAGA TGAATTCTTA GCCATTGCCC
CTCTCCTGAG CAGAGGATGC TGAGCTTCCT AGCTTCCTGC AGTAATAATT GCAGTGCCTC
AGAGTTGCAC AGCATTCTAC AGTTTACCAG GTGCCTTGAA AGCATGCGTT ATGTCATTTT
AGCCTTGCAA TAACCCTGTG GTGTGGGACT TTTCCTAGTG CTAAGGCATG GGCCACACACC
CAGGTTTTGT ATCCTGGGTT CTGTCACCGG CCTTTCTAGA CATGTTTCTT CCATTTCTTT
TTCCTTTCCC CTCAGCTAAT CCTCATGCCT TTGCTTGCTT CTCTCCCGAG TGGGTTCTGG
TTTCTTCAAG AGCTGTGAAG AGGGGGTCAG GGAAGGAGT GGGGTGAAGA GAGGGTGGGT
GCTCAGGATA TGGGTACATT GCCTGGCCTG GTCACATTGG CTTTGTAGTT GCTTCTAGAT
ACATCCTGTG TTAGTGACAG ATCAGCATGT TAGGGAAATA AAACACGTAT GTTGAGCCTG
CGTTTTCCCG TACTCCACAG

SEQ ID NO. 8

Exon

AGCCGCAAAC AGGAAAAGGC CTGCGAGCAG CCGGCCCTGG CGGGGGCTGA TAACCCAGAG
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GACAGTGGGA AACAGGCACT GGCTCCAGGC CTCAGCCCTT CCCAGAGGCC GGGGGGTTCC
AGCTCTGCCT GTAGCAGGAG CCCTGAGGAG GAGGAGGAAG AGGATGTGCT GAAATACGTC
CGGGAGATCT TTTTCAGCTA GGGCATAAAC TGTGCACTGA ACTGTCTGCC GAGAGCAGCT
GGAGGACAGC TGAGCTTCCA CTGGTGCTGC TGGGCCGCCC GCCTGTGGGA ATGGGGCTCT
CTGTGCTCCT ACCTTTGTGC CTTCTTGGGC CTGGCAGATT CACCTCAGGC CAGAAGCCCC
TGGACACTCC GGGCCTTGGG GCTGCCGTTT TGAGTGTGCG GAAGGCAGGA CTCAAAATGA
GATCCCATTG GACTCCCTCT GTATGTACTG TGCCCTCTCC TGGCTCTTGA GGCTCTGGAG
TCCAATTGT CTGTGTTAGT CAGTGACCAG GTTCCAGGGA AAATGATGTC ATGTGGTGGT
CCAATTACT GGAACCAAAG AGACAGTACT T

Figure 1

g c g g c c g c t c c a g t c g g a a g g a g c c g t t g c a g c c c t g c c c g g c g t g t g g c g g g g t c a g c g
a g g c c c c t g c g g t g c t t c g c c c g c g c c t t c c g t c c g c a c t c a c c c g c c c t c t g g g c c t c
c c a c a g g t c g g c g c c g c c a g c g g c g g g t a c c g g c c c g c a g a g g g a g g g c g g g c t g t g a a c
t g g c a g c a c a t c g c g t t c c c g c g g g g c c c c c a t t c t g c c c a g g c a g g g a g c g g c t g g g a t
g g g a c t g a g g t c g g t c c g c g a g c g c g g t g c c c c a g a g a c c c g g c t t c t g g a a g t t g c c g c
g g c c t g c t c t t g g g g c c c a g a a g t a g g g c g g g g a g g c g c g g g g t c t g g a g t c t g c a g g a c
c t g g c t g c g a a t c c a a c c a g c t g a t t t c a a a c t t t t c t g t g a t c t t c t g c a a g t t a a c t a
a g t c t c a g t t c c t c g t t t g c g a a a t g t a c t t a a t a g g c a c c c c a g g g t g a a c t a a a t t t g
t c c g c a c a g a c t g c a g c a t t g c g c t t g g g a g g c g c c t t a t g g g g t a g g a g t c a c t a a t a t
c a c t g a g t t t t g a c a g a a a t g a a g t g c a t t g g c a a a g g a a t c a a a g a t c a a c t c c c a c t g
a g g a c a a a t g g a c c t g t a a t t c c g g g t g t g a c g a g a g a a c g a g a t t t a c c t t c c t g a a t t
a a a a a a c a g a c t c c c t g c g a c a a g g a c t g t g t a c t g c a t g a a t g a g g c t g a g a t a g t t g a
t g t t g c t c t g g g a a t c c t g a t t g a g a g c o g c a a a c a g g a a a a g g c c t g c g a g c a g c c g g c
c c t g g c g g g g g c t g a t a a c c c a g a g c a c t c c c c t c c c t g c t c c g t g t c g c c t c a c a c a a g
t t c t g g g a g c a g c a g t g a g g a a g a g g a c a g t g g g a a a c a g g c a c t g g c t c c a g g c c t c a g
c c c t t o c c a g a g g c c g g g g g g t t c c a g c t c t g c c t g t a g c a g g a g c c c t g a g g a g g a g g a
g g a a g a g g a t g t g c t g a a a t a c g t c c g g g a g a t c t t t t g t c a g c t a g g g c a t a a a c t g t g
c a c t g a a c t g t c t g c c g a g a g c a g c t g g a g g a c a g c t g a g c t t c c a c t g g t g c t g c t g g g
c c g c c c g c c t g t g g g a a t g g g g c t c t c t g t g c t c c t a c c t t t g t g c c t t c t t g g g c c t g g
c a g a t t c a c c t c a g g c c a g a a g c n t c g g a c a c t c c g g g c c t t g g g g t g c c c g t t c t g a g
t g t g c g g a a g g c a g g a c t c a a a a t g a g a t c c c a t t t g a c t c c c t c t g t a t g t a c t g t g c c
c t c t c c t g g c t c t t g a g g c t c t g g a a g t c c c a a t t g t c t g t g t t a g t c a a g t g a c c a a g g
t t c c a g g g a a a a t g a t g t c a t g t t g g t g g t c c a a c t t a c t t g g a a a c n a a a g a g a c a g t a
c t t

SEQUENCE LISTING
1. Amino acid sequence of the protein encoded by the nucleotide sequence of the DNA sequence shown in Figure 1, SEQ. ID NO. 1, is:
G C G G C C G C T C C A G T C G G A A G G A G C C G T T G C A G C C C T G C C C G G C G T G T G G C G G G G T C A G C G
A G G C C C C T G C G G T G C T T C G C C C G C G C T T C C G T C C G C A C T C A C C C G C C C T C T G G G C C T C
C C A C A G G T C G G C G C C G C C A G C G G C G G G T A C C G G C C C G C A G A G G G A G G G C T G T G A A C
T G G C A G C A C A T C G C G T T C C C G C G G G C C C C A T T C T G C C C A G G C A G G G A G C G G C T G G G A T
G G G A C T G A G G T C G G T C C G C G A G C G C G G T G C C C A G A G A C C C G G C T T C T G G A A G T T G C C G C
G G C C T G C T C T T G G G G C C C A G A A G T A G G G C G G G G A G G C T T G G A G G T C T G G A G T C T G C A A G T T A A C T A
A G T C T C A G T T C C T C G T T T G C G A A A T G T A C T T A A T A G G C A C C C A G G G T G A A C T A A A T T T G
T C C G C A C A G A C T G C A G C A T T G C G C T T G G G A G G C G C C T T A T G G G G T A G G A G T C A C T A A T A T
C A C T G A G T T T T G A C A G A A A T G A A G T G C A T T G G C A A A G G A A T C A A A G A T C A A C T C C C A C T G
A G G A C A A A T G G A C C T G T A A T T C C G G G T G T G A C G A G A G A A C G A G A T T T A C C T T C C T G A A T T
A A A A A A C A G A C T C C C T G C G A C A A G G A C T G T G T A C T G C A T G A A T G A G G C T G A G A T A G T T G A
T G T T G C T C T G G G A A T C C T G A T A A C C T T G A G A G C O G C A A A C A G G A A A A G G C C T G C G A G C A G C C G G C
C C T G G C G G G G G C T G A T A A C C C A G A G C A C T C C C C T C C T G C T C C G T G T C G C C T C A C A C A A G
T T C T G G G A G C A G C A G T G A G G A A G A G G A C A G T G G G A A A C A G G C A C T G G C T C C A G G C C T C A G
C C C T T O C C A G A G G C C G G G G G T T C C A G C T C T G C C T G T A G C A G G A G C C C T G A G G A G G A G G A
G G A A G A G G A T G T G C T G A A A T A C G T C C G G G A G A T C T T T T G T C A G C T A G G G C A T A A A C T G T G
C A C T G A A C T G T C T G C C G A G A G C A G C T G G A G G A C A G C T G A G C T T C C A C T G G T G C T G C T G G G
C C G C C C G C C T G T G G G A A T G G G G C T C T C T G T G C T C C T A C C T T T G T G C C T T C T T G G G C C T G G
C A G A T T C A C C T C A G G C C A G A A G C N T C G G A C A C T C C G G G C C T T G G G G T G C C C G T T C T G A G
T G T G C G G A A G G C A G G A C T C A A A T G A G A T C C C A T T T G A C T C C C T C T G T A T G T A C T G T G C C
C T C T C C T G G C T C T T G A G G C T C T G G A A G T C C C A A T T G T C T G T G T T A G T C A A G T G A C C A A G G
T T C C A G G G A A A A T G A T G T C A T G T T G G T G G T C C A A C T T A C T T G G A A A C N A A A G A G A C A G T A
C T T

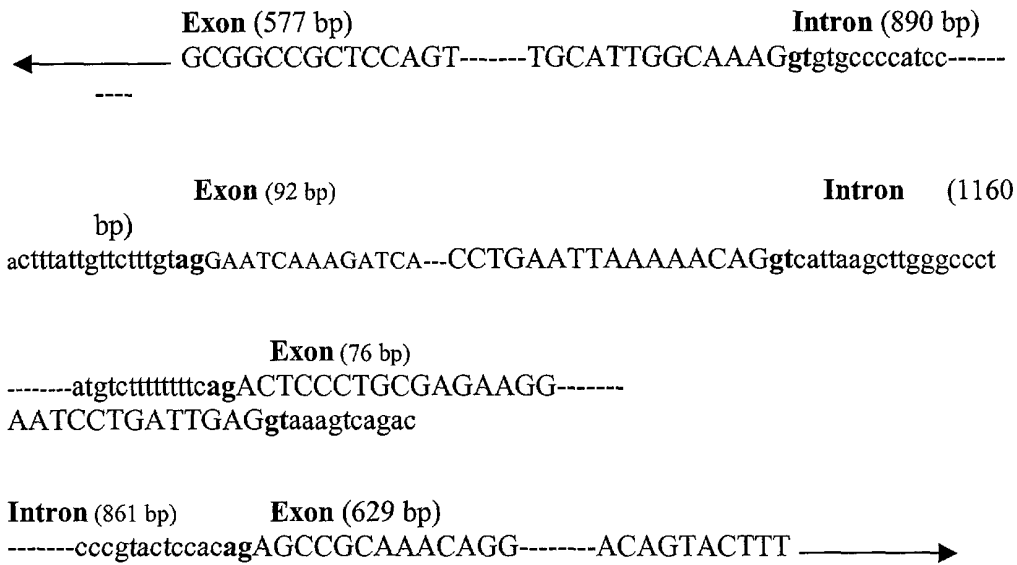


Figure 2